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## ANALYSIS OF THE NATURE OF CAPITAL AND INTEREST

*Factors of the current interest rate.*—It is a matter of experience that under the controlling influence of supply and demand things produced through the employment of capital attain, as a rule, a value exceeding the cost of production.[1] The excess of value thus attained in the employment of capital over the cost of employing it is recognized as the "earnings" or "returns" of capital.

A similar feature attaches to money. Like the employment of capital, so the lending of money involves the item of cost of maintenance, comprising insurance against possible failure of the debtor to repay the loan, as well as recompense for labor employed in supervising the loan in its various stages, in collecting interest and principal, and in other ways. The gross interests, or rental of money, like the gross income from employed capital, is found, as a rule, to exceed the cost of maintenance. It is therefore regarded, in general, as consisting of three parts: first, recompense for labor; second, insurance against risk; and third, earnings of money. This latter factor

[1] The phrase "cost of production" is here to be understood in its broadest sense, embracing, besides the cost of material and labor required in the employment of capital, the cost of its maintenance, including the items of the various risks due to the chances of accidental destruction and other losses, as well as the value of the personal services rendered by the employer. It includes the value of all factors normally entering into the process of manufacture and commerce.

is strictly analogous to the "earnings of capital," and both being apparently due to the same cause, they are generally regarded as being identical in their nature.

In economic discussions the term "interest" is now generally confined to this net profit returned by money and capital and, instead of denoting, as it does in business parlance, the gross sum paid as the rental of money, it becomes a synonym of "earnings of capital," or the net profit of employed capital remaining after the deduction of all the costs of employing it.

But while this definition of "interest" is agreed upon by practically all modern authorities on economics, no corresponding agreement has yet been reached as to the cause of this income-bringing power of money and capital.

*Relation of interest to capital.*—The most comprehensive study of this subject up to the present time is presented in Professor Böhm-Bawerk's *Capital and Interest.*[2] In the first volume of this work the author, with masterly and convincing logic, points out the inadequacy of previous theories to account for this distinctive faculty of capital. His critique practically disposes of those earlier theories, especially of that one which attributes interest to a supposed productive assistance which capital renders to the producer. The second volume is devoted to the presentation of the "Positive Theory of Capital," virtually a new theory of interest. This new theory was received with much approbation at the time and has come to be accepted more generally than any other explanation of the facts with which it deals. Yet it has not escaped much adverse criticism at the hands of various writers, and is far from being regarded as a conclusive answer to the question at issue.

Among the comments that appeared shortly after the publication of *Capital and Interest* was one by the present writer in which he endeavored to point out what appeared to him as an

[2] *Kapital und Kapitalzins,* von Eugen v. Böhm-Bawerk, I Abteilung: Geschichte und Kritik der Kapitalzins-Theorien, Insbruck, 1884. II Abteilung: Positive Theorie des Kapitales, Insbruck, 1889. Translated by William Smart: *Capital and Interest,* 1890; *Positive Theory of Capital,* 1891; London and New York.

incongruity in the *Positive Theory*.[3] Since then a further study of the subject has revealed a number of other discrepancies, a consideration of which will show that not only are Professor Böhm-Bawerk's conclusions open to question, as then pointed out, but that the very premises on which the conclusions are based are in conflict with the facts of the case. It is these latter considerations which are presented below. Before proceeding to weigh these considerations in detail, a brief review of the theory in question will be desirable.

*Outline of the "positive theory of capital."*—In the derivation of the "Positive Theory of Capital" the primary reason for interest is sought in the hypothesis that "present goods are, as a rule, worth more than future goods of like kind and number." [4] In this postulate the term "present goods" is applied to those goods which are adapted and intended for the satisfaction of immediate needs and desires and which may therefore be termed "mature goods," while "future goods" are those that will become available for such use in the future, especially those comprised in promises of future delivery or in expectation of future production. There is also a third class of goods which, in a way, occupies an intermediate place, namely goods which are in present existence but not yet matured, that is not adapted to render immediate gratification; such as means of production and distribution—in short, capital-goods. Only mature goods can be consumed in the sense of rendering that satisfaction which is the aim of all productive efforts. Taking the standpoint of the consumer, Professor Böhm-Bawerk views capital as possessing, in a latent and immature state, a portion of the utilities that will ultimately be realized through its use. According to this conception the utilities thus inherent in capital are approaching maturity while more utilities of the same order are added by subsequent labor. A loom, for instance, possesses the germs of a portion of the utilities afforded by the garments that are ultimately brought into existence by the labor applied to it and

[3] *Quarterly Journal of Economics*, January, 1892. A rejoinder appeared in the same Journal, January, 1896, pp. 136 ff.

[4] *Positive Theory*, p. 248 (237). (Numbers in parentheses refer to the English edition.)

by the additional work of the tailor. The total utilities of the final product, then, are derived in part from the loom, in part from the yarns and other material used, and in part from the labor of weaving, sewing, and selling. Of course, a loom can be used only for the making of a definite quantity of cloth, its usefulness being inevitably limited by wear. As the loom is wearing out by use, its latent utilities gradually enter into the product where, by a kind of economic metamorphosis, they reappear in a more nearly mature state, together with those which have been newly created by the labor applied. Since time must necessarily expire before the latent utilities thus inherent in means of production become available, capital is viewed as representing goods available at a future time. In many forms of capital the inherent latent utilities are of an indeterminate kind, their ultimate nature depending upon subsequent conditions, according as the capital is employed in one or in another branch of industry.

The difference in the valuation of present as against future goods, it is claimed, results from the co-operation of a number of causes which, though of different nature, exert their influence in the same direction. Three of the principal causes are enumerated. The first [5] consists of the difference of the relation of demand and supply at different periods. This may be exemplified in the case of a farmer who has lost his crop and needs immediate relief, or in the case of, say a young physician who is in need of means for his establishment and looks forward with confidence to his more prosperous future. In such cases it will be a less hardship to return a greater value in the future than to suffer for the want of a lesser value at present. The second cause adduced [6] is of a purely psychological nature, namely the propensity of man to underrate future pleasure and pain simply because they are remote. The postulate put forth as the third cause [7] is really an elaboration of the first and second causes in their relation to the proposition that "the roundabout ways of capital are fruitful but long," [8] in the sense that the time inter-

[5] *Ibid.*, pp. 262 (249) ff.

[6] *Ibid.*, pp. 266 (253) ff.

[7] *Ibid.*, pp. 273 (260) ff.

[8] *Ibid.*, p. 87 (82).

vening between an effort of production and the realization of the utilities ultimately resulting from this effort exceeds the corresponding period when primitive efforts are employed; and that this interval increases with the adoption of more efficient and incidentally more complex processes of production. Thus, if an employer has at his disposal, say, one month's labor, in other words, so much capital, he may proceed to employ it with greater or less efficiency, according as he selects a more or less complex system of production. If he desires quick results in the form of "present goods," he will obtain from the same amount of capital less goods than if he chooses a method that will yield the finished products after a longer interval. The amount of goods obtainable from a given quantity of capital will therefore in the end be the greater the more complex and protracted the method of production.

However, it is pointed out, the greater *quantity* of goods thus obtainable in the future has not a correspondingly greater *value,* because future goods have a less value than present goods. As the loss of time involved in the use of more complex methods of production becomes greater, a point must be reached beyond which the reduction of value due to that loss exceeds the gain obtained by the increase of products.

At this point in the various possible methods of production the *present value* of the goods obtainable from the capital employed reaches its maximum; in other words, it then exceeds the present value of the future goods obtainable by any other method of production, be it more complex or less so. This maximum "present value" of the future products which will be obtained only by a judicious selection of the proper method of production determines the value of the capital. According to this theory the present value of capital equals the *discounted* value of the future utilities inherent in and obtainable from the capital.

Upon these propositions Professor Böhm-Bawerk bases his theory of interest. His conclusions are summarized under three heads, the first relating to the subject of loans and interest on loans; the second to employed capital and its returns; and the

third to returns from durable goods, a subject which really forms an elaboration of the preceding considerations.

A loan is viewed as an exchange of present for future goods.[9] The lender gives a present sum of money in exchange for a future sum. In order that the future sum promised by the borrower shall have the same present value as the present sum given by the lender, the future sum must exceed the present one, and when the debt matures, that greater sum is returned by the borrower. Where the loan is absolutely secure and all charges for risk and supervision are eliminated, the excess of the sum returned by the borrower over the sum originally advanced by the lender is "interest."

The income from capital in active employment is explained on the theory of the *discounted* estimation placed on its future utilities. While the immature utilities inherent in capital ripen into consumable utilities, their initially discounted valuation, from which the value of capital is derived, grows to full rate, and the attending increase of value constitutes the "interest" that accrues to capital.[10] It goes without saying, indeed, that this increase in the value of the latent utilities of capital can occur only while these utilities are being brought nearer to their state of maturity, that is, while the capital is utilized in production. When capital lies idle, when the latent utilities remain in *statu quo,* "interest" cannot arise.[11]

This is in substance the line of reasoning by which Professor Böhm-Bawerk seeks to account for interest. But, as has been indicated above, even the premises are open to dispute.

*The element of time in processes of production.*—One of the essential premises of his deduction is the assumption that the indirect or capitalistic methods of production, though more efficient than the primitive methods, are more time-consuming. Actual facts do not bear out this assumption, as may best be shown by a concrete example.

Let us compare the primitive with the modern method of producing knit gloves on the following basis.

[9] *Ibid.,* pp. 299 (285) ff.

[10] Cf. *ibid.,* p. 318 (302) ff.

[11] Cf. *ibid.,* p. 319 (303).

One workman, knitting by hand, can finish one glove per hour, or 10 per day. The modern method requires a set of four machines, each performing a different operation. Four workmen can make these machines in 6 years and then, by the use of these machines, can finish 160 gloves daily. In 20 years of 300 working days each, or after the completion of 960,000 gloves, that is, 480,000 pairs, these machines will be worn out and fit only for the scrap heap.

It does not matter whether these figures agree with the actual state of the art. They are, in fact, rather conservative and are adopted merely as an illustration.

The modern method is of a composite nature. The first efforts toward the making of gloves are applied to the making of the machines which latter thereby become the embodiment of a certain part of the labor necessary to make gloves. These machines will represent 960,000 gloves in a partly complete state, the machines themselves being the result of the first efforts in the making of gloves, efforts that must be followed by subsequent efforts of a different nature for finishing the product. These subsequent efforts consist in the operation of the machines whereby the finished goods are obtained. The first one of the gloves will be finished after the expiration of 6 years, counting from the beginning of the work; the last one 20 years later, namely at the close of the twenty-sixth year. From the beginning of the seventh to the close of the twenty-sixth year the production of finished gloves will keep on at a uniform pace, hence the *average* time expiring between the very beginning of the work and the completion of the goods is 16 years.

How does this contrast with the primitive method? The same four men, if knitting by hand, will complete 4 gloves in the first hour and will then begin another lot of 4. In making each glove only one hour will elapse between the beginning of the work on it and its completion, and it would appear that our author's reasoning proceeds on the basis of a comparison of this period with the average time of 16 years of the preceding case.

This comparison is, however, very incomplete, as the time of making 4 gloves cannot reasonably be contrasted with the time

of making nearly a million. The four machines were the result of labor applied toward the making of 960,000 gloves. While the machines were being made, the work of producing this quantity of goods was uniformly advanced, and even the first hour's work on the machines was as necessary for the production of the last glove as it was for that of the first one. To make the comparison reasonable, it should be based on equal quantities produced by an equal expenditure of labor. The period of 16 years is the average interval between first effort and completion in the making of 960,000, not in the making of 4 gloves. To make this larger number by the primitive method, four workmen would have to work 80 years, which corresponds with an average of 40 years expiring between the beginning of the work of making this number and the completion of the goods. The comparison, then, is obviously in favor of the capitalistic method in the proportion of 16 years to 40.

At the same time, the fact must be admitted that at the beginning there is a period in which the balance is in favor of the primitive method. Should two groups of four workmen each begin work on the same day, one group adopting the primitive, the other the capitalistic method of production, the first group would at once come into possession of "present goods," while the second group would not have a single glove finished until after 6 years of labor; and, in addition to this time, 2 years would be required by the second group to overtake the first one. But thereafter the second group would come into possession of present goods in the form of finished gloves so rapidly that the first group would be left far behind. Even if a second period of six years were spent in the making of another set of machines after the first set is worn out, the second group, 32 years after the beginning of the operation, would still have, in addition to the new machines, an excess of 576,000 gloves over the production of the group that had adopted the "less time-consuming" method. Both this excess and the new machines are a clear gain, in quantity as well as in time, resulting from the adoption of the capitalistic method of production. After the expiration of that initial period of 8 years the second group will never again

fall behind the first one, but will forever remain far ahead in the possession of "present goods" which will be forthcoming more rapidly, by an equal expenditure of labor, than the first group can ever hope for. As regards the production of present goods, the first group has an advantage over the second one only during the initial period, but never again thereafter. It is obvious that the method which affords such an excess of products, the method by which the total time for completing an equal quantity of goods is reduced from 80 to 26 years, cannot in any sense be considered the more time-consuming one. Instead of involving sacrifice of any sort, the capitalistic method is a source of gain in time as well as in every other respect after once the initial period has been passed. Only for this initial period is it true that capitalistic methods of production involve the disadvantage of a sacrifice in time.

Were a similar comparison to be made between two capitalistic methods, the one being more productive but more indirect than the other, the result would be essentially the same. It can therefore be definitely asserted that—barring a brief initial period—the most productive method is by all rules of logic also the quickest. Modern methods, instead of delaying production, actually hasten the same. They invariably bring "present goods" more rapidly into the possession of the producer than the more primitive methods do.

This is in direct conflict with the proposition which forms the groundwork of Professor Böhm-Bawerk's explanation of the interest returned by capital when used in production. His theory might possibly be considered, at least from this standpoint, as accounting for interest on capital for a brief period immediately following the introduction of a new process of production or of a new invention, as exemplified by the first 8 years of our illustration; but even so, the persistent income to capital, so characteristic of our present industrial system, remains unexplained, for, deprived of the fundamental premise, the whole structure of the theory as well as the final conclusions must fall.[12]

[12] "The disadvantage connected with the capitalist method of production is its sacrifice of time. The roundabout ways of capital are fruitful but long;

It appears that Professor Böhm-Bawerk has omitted to take into account the fact that enhanced productivity will ultimately more than compensate for the increased time during which the products of the capitalistic methods continue in an immature state. He has taken into consideration only the period immediately following the inception of an improved method of production, and overlooked the conditions that must ensue a few years later.

*The value of lending.*—We have however still to deal with the theory that borrowers pay interest to lenders because of a lower valuation of future goods as compared with the present. This theory also will be found to be totally inconsistent with existing facts.

Conceding, for the sake of argument, that the disposition of men to discount the future be as predominant as the *Positive Theory of Capital* assumes, it necessarily follows that a disposition to delay irksome efforts of production and to hasten gratifying consumption is correspondingly predominant. This propensity would naturally lead to a desire to realize and enjoy the possession and consumption of goods *before* doing the irksome work of producing them or their equivalent, that is, a desire to anticipate consumption or, as we may here appropriately term this condition, a desire to "preconsume."[13] Thus, a person may consume goods which he has not produced but has acquired in exchange for an equivalent to be produced and delivered later, provided he can find someone who is in possession of goods already produced or acquired in the past and who is willing to "lend" the same for a time; which, of course, implies a willingness to forego temporarily the enjoyment of such goods, a willingness to content himself with the less valuable future pleasure when the more valuable present pleasure is within his reach, In short, the lender must be willing to practice "abstinence," or "waiting," in order that the borrower may preconsume.

they procure us more or better consumption goods, but only at a later period of time. This proposition, no less than the former, is one of the ground pillars of the theory of capital."—*Ibid.*, p. 87 (82).

[13] The writer has coined the descriptive terms "preconsumption" and "preproduction" for the purpose of facilitating the presentation of his argument.

The terms "abstinence" and "waiting" are not as descriptive as might be desired. They indicate a merely passive factor of the case, and fail to imply the preceding act of production which is manifestly the primary and essential factor. It would perhaps be more suggestive to describe the service rendered by the lender as "preproduction," implying that he has *produced in advance of the time* necessary to satisfy his personal needs or desires. Although, according to the premise above conceded, the lender's estimation of present efforts exceeds that of future efforts of equal productivity, he has actually expended the more valuable or present efforts when the less valuable or future efforts would have sufficed for him. Having done so and giving the benefit to others, the lender will naturally expect a recompense, namely "interest."

It is, of course, self-evident that "preconsumption" implies *ipso facto* "preproduction," preconsumption by one person being the act of realizing the benefit of preproduction performed by another.

That the service rendered by the lender or preproducer may at times have a utility of the highest degree cannot be questioned. Circumstances may arise under which it will save life, as in the case of a farmer whose crop was destroyed by hail and who must starve if others are not willing to lend him the means of subsistence, an equivalent of which he could without difficulty return to the lender from next year's crop. From this utility of highest importance the possible utilities derivable from preproduction may range down through all grades of importance to the vanishing point. The service rendered by preproducing and lending, then, comes within the range of the law of value; its value depends upon its *final* utility.

In his elaboration of the law of value Professor Böhm-Bawerk has clearly shown the process by which final utility and with it the market value is determined; and his reasoning must, of course, be applicable, not only to goods, but to all other forms of service as well. Accordingly, the final utility and, with it the value of lending, is measured by the importance of that con-

crete want which is least urgent among the wants that are met from the available stock of preproduction.[14]

It is here that the theory clashes with the facts of the case. An inquiry into the available volume of preproduction reveals a condition of things totally inconsistent with the cited premises, a condition that manifests itself with distressing prominence especially during periods of business depression, when the producers, almost without exception, are handicapped by an accumulation of their products which they are unable to sell. The supply of produced things, and that of labor especially, vastly exceeds the effective demand. The wheels of industry come to a partial standstill, not, however, by reason of the alleged propensity of men to defer production, for both manufacturer and workmen are anxiously scanning the market for every opportunity to resume work that has been interrupted by an apparently occult force. If the status were reversed, if the supply of labor and its products were below the effective demand therefore, the hypothesis that an undervaluation of the future and a consequent desire to shirk work is the prevailing condition might be entertained. But the conditions are really quite the reverse. More has been produced than the market can absorb. Everywhere production has run ahead of consumption. Excessive preproduction is responsible for the general distress and the desire to produce still more is forcibly shown by the clamor for work on the part of the unemployed. Against their will the preproducers are forced to unremunerated "waiting." Everywhere the possible utilities of preproduction irretrievably go to waste. Its supply far exceeds the demand, for otherwise it would be utilized. The "least urgent want met from the available stock" of preproduction is at the vanishing point; hence the value of this service like that of air and water, is *nil,* in accordance with the recognized theory of value.

*The relation of money to merchandise.*—Notwithstanding this, however, we find that the manufacturers and merchants, the possessors of the wealth that is a drug on the market, the men who have produced wealth far in advance of the demand

[14] Cf. *ibid.*, p. 157 (148).

therefor, and who, after preproducing, are forced to unremunerated waiting, are the very men who flock to the banks and money lenders, seeking that which, according to the "Positive Theory," is but a form of preproduced wealth. Viewed from the standpoint of this theory, they purchase from others the service of preproduction, paying the high and to them often ruinous current price of loans, while they themselves have preproduced and are "waiting" without even a chance of obtaining any recompense for doing so. Surely, it is inconceivable that the bulk of business men have so little understanding of their interest as to pay a high price for something of which large quantities are constantly going to waste on their own hands and which, for this reason, can have no value. How can these facts be reconciled with our author's theory?

It is to be noted that the goods on which the supposed value of preproduction is so frequently unrealizable, the goods that are so often produced far in advance of the demand, the goods on which interest is so often irretrievably lost, are those that are still in possession of the producers or of the merchants, goods for which a purchaser has not yet been found—in short, merchandise.

It is true, there are forms of wealth for the temporary use of which men are willing to pay interest in the form of "rent" or "hire," things that are in the market for lease and not for sale, like dwellings offered for rent, liveries offered for hire, and the like. But of all forms of wealth that which is most in demand, not only by borrowers, not only by those who, according to the "positive theory," want to use the preproductions of others, but also by those who wish to dispose of merchandise, is money.

What is the cause of this condition? A strongly marked demand for money in exchange for merchandise is manifested in every province of the industrial and commercial world. The struggle of competition resolves itself into efforts of getting money for merchandise *before a competitor gets it.* Enormous sums are expended on advertisements. Efficient salesmen command high salaries. Even unfair means are at times resorted to

in efforts to drive competitors from the field. The ceaseless search for markets, the persistent efforts to *sell,* are reflected in the prevailing belief that the prosperity of nations is enhanced when they export more than they import, when they send out more present goods than they receive. This belief induces governments to encourage selling and discourage buying, promoting exportation by bounties and impeding importation by tariffs. Even wars have been waged for the purpose of securing foreign markets for the home products. Indeed, the persistent outcry for tariffs during the so-called periods of prosperity as well as during times of depression irrefutably testifies to a persistence of the excess of the supply of things over the effective demand, to a continued preponderance of unrequited preproduction, not only during the exceptional years of stagnation, but at all times. Well may we ask, *why is it that the mere medium of exchange is so much more in demand than merchandise, the very object of exchange?* Can the "positive theory" furnish an answer to this question? Since money more than any other form of wealth is sought by would-be borrowers, the theory that accounts for interest should be able to throw some light on this question. Let us see.

*Money never "present goods."*—Of the goods that are offered in the market, some are near the point of economic maturity, others are not. Some are practically mature or present goods, like foodstuffs, clothes, furniture, articles of luxury. Others are immature goods, such as cotton, dry-goods, steel rails, machines. They require a greater or less time for their conversion, by industrial or other processes, into consumable goods or gratifying services. All of them are adapted to render gratification, directly or indirectly, sooner or later, after their sale is effected.

But what is the status of money? What advantage does it offer to the would-be preconsumer? Neither borrowers who obtain money in exchange for their credit, nor manufacturers, merchants, or workmen who accept money in exchange for goods or services, do so with the intention of actually using it up. Those who accept money in exchange as well as those who

borrow it intend to expend it in the condition in which they receive it. Its utilization, then, in the sense of actual consumption, whether for gratification or for use in the process of maturing its utilities, is not sought by those who acquire money; and being never desired for actual consumption, money is a typical form of "future goods," in fact, of goods of the indefinitely distant future.

This conclusion finds corroboration in the fact that certain credit instruments can perform the function of money as well as coin. It has been stated that over 95 per cent. of the exchanges in commercial centers are settled by checks or other credit instruments. But credit instruments are promises to pay and therefore nothing but "future goods," and inasmuch as they perform the function of money, they, together with money belong in the same category.

It is true, the bankers' substitutes for coined dollars, the bank notes, are promises to pay "on demand," and bank accounts, another form of dollar substitutes, are likewise credits that can nominally be cashed on demand; but a redemption of bank notes is rarely called for, and bank accounts are usually redeemed in credit instruments, such as paper currency, conclusively showing in this case the absence of any disposition to obtain "present" in exchange for "future" goods, even if, in view of the fact that coin may be smelted down and used for industrial purposes, gold coin were considered as belonging in the category of present goods. Moreover, the "on demand" clause of these promises—be it definitely expressed in so many words, as in bank notes, or merely implied, as in bank accounts—is well understood to be conditional, for if only one-tenth of all the claims embraced in both note issues and bank accounts were presented at one time to all banks for payment in gold, the only ultimate medium of redemption, practically every bank would be forced to suspend payments. And notwithstanding this known inability of banks to redeem in gold at any one time more than a small fraction of their demand obligations, their credits freely pass from hand to hand as money. It is quite

manifest from these facts that neither bank notes nor bank accounts can logically be classed as "present goods."

Even the current practice of banking is inconsistent with the assumption that a loan is an exchange of present for future goods. The men who habitually discount the future, those who always want to defer until tomorrow that which need not be done today, the indolent, improvident, and impecunious, are not among the bankers' customers. On the contrary, these customers are recruited almost exclusively from among those who have accumulated wealth and who, by so doing, have shown that they do not habitually underestimate future pleasure and pain, but have been in the habit of preproducing rather than preconsuming. Nor is the mere fact that they are possessors of wealth a sufficient guarantee to lenders, for every borrower is invariably expected to give specific security by conferring on the lender the right, in event of his own failure to live up to his promise, to seize, by process of law, so much of his property as will cover the debt.

Such right is indeed conferred by giving promissory notes. Hence a loan, instead of being an exchange of present for future goods, is an exchange of credits, an exchange of one form of future goods for another form of future goods. The borrower gives his "promise-to-pay," that is to say, his credit, in exchange for the banker's "promise-to-pay," or credit. And if the banker gives gold coin instead of mere bank credit, that which he gives, like the borrower's promissory note, consists of strictly "future goods," that is, of goods not intended for consumption, nor, indeed, so adapted except when melted down for use.

It is thus plain that mony in any of its forms cannot properly be regarded as "present goods."

*Money never a means of production.*—Nor, indeed, can money properly be classed with means of production, or capital-goods. Under Professor Böhm-Bawerk's conception of capital such classification of money is clearly incorrect. Although money is universally regarded as capital, it certainly is not of the kind to which his deductions apply. The argument adduced

for regarding stored goods as capital [15] is obviously inapplicable to money. Stored goods are goods in the process of maturing, at least so long as the storage is a normal part of the process of preparing the goods for the market. They are passing through the commercial stage of production, namely the process normally necessary to transfer them from the producer to the consumer. The temporary storage is included in that period in which the value of the products increases from the cost value to the selling value, the difference covering, besides other items, the "interest," attributed, by Professor Böhm-Bawerk, to the gradual disappearance of the discount, as future utilities become present ones. Money presents a radically different case. Turning gold from its commercial form as bullion into its conventional form as coin can in no wise be classed as a process of bringing gold nearer its point of consumption. None of the latent and immature utilities possessed by the gold coin is ripening into consumable utilities while the coin is being used as a medium of exchange. The *present* value of money is *not* the *discounted* estimate of its future value; it is *not* increasing while the coin is utilized. On the contrary, by the act of coining the processes by which the latent utilities of gold might have been matured are positively arrested for an indefinite time, and although those utilities are likely to be brought to use only in the far distant future, if at all, their value is not discounted in consequence of that fact. Gold, when coined, is distinctly dead capital in the sense in which the term "capital" is used in the deduction of the "positive theory," [16] for the latent utilities of the coined gold remain positively in *statu quo*. Hence the "positive theory" cannot apply to *money*, even if it could satisfactorily explain the power of *capital-goods* to produce interest.

Against the preceding reasoning may be advanced the argument that gold, when coined, is adapted to perform a most important commercial function, namely, that of mediating exchanges and, as a commercial tool [17] should be classed with "durable goods," [18] namely such as are capable of successively

[15] *Ibid.*, p. 70 (66).

[16] Cf. *ibid.*, 319 (302).

[17] *Ibid.*, p. 71 (67).

[18] *Ibid.*, pp. 360 (339) ff.

rendering valuable services for an indefinite time. These services, it may be argued, are necessary factors in the process of maturing the utilities inherent in other capital. Money, then, like other forms of capital, should be considered as containing a portion of these utilities in a latent and immature state, just as a loom can be considered to contain, in an immature state, the utilities of the clothes made from the cloth that will be woven on it, or as a railroad or a ship contains the utilities which things gain by transportation, and interest would accrue to money because of the gradual increase of the originally discounted value of these latent utilities as they develop from a future or immature to a present or mature state of existence.

This argument will be found to be untenable for this reason.

Current funds, comprising money and its substitutes, occupy a unique place among economic "goods." Their use is in no wise essential to the processes of maturing utilities inherent in capital, such processes necessarily implying a change of form, composition, or location of things. The function of money consists solely in mediating changes of *ownership* of things. The operations of money are not of a constructive nature; they affect solely the relation between the things and the owners. In a technological sense money possesses no utility whatsoever. The services performed by money could be performed by a system of bookkeeping. While the utilities inherent in capital can approach maturity only by the more or less persistent application of labor to it, a process involving *time,* money is of service to the possessor only for a *momentary* transaction; it passes out of his hands the very moment he puts it to use in making a purchase or in paying an account, thus serving only to facilitate the transfer of ownership of things. How, then, can we conceive a gradual increase of an originally discounted value of future utilities if the essence of "gradual," namely, the element of time, is absent? The assertion is often made that "while a man keeps money, he loses interest on it." This of itself is proof positive that future utilities of present discounted value, on which the discount disappears as time progresses, do not exist in money. The radical difference which exists between money

and capital can hardly be illustrated better. Then, why should we place these two essentially heterogeneous things pell mell in the same class? Even assuming that the "positive theory" were applicable as an explanation of returns to capital, the motives that may induce a man to give mature goods in exchange for immature goods, with the intention of utilizing them in his trade or profession, that is, of having their latent utilities ripened by applying to them labor and time to enable the discounted values to expand to full rate, evidently cannot account for the desire of the producer or merchant to give merchandise for money, nor for his willingness to give interest for the loan of money on which he will lose interest while he keeps it.

The absence of the element of time in the function of money conclusively takes money out of the category of capital-goods.

The possessor of merchandise, in trading it for money or any of its substitutes, virtually makes a *call loan of goods* to society and remains its *creditor* until he parts with this money in exchange for other goods. This is indeed literally true if he accepts credit money; if he receives coin instead, the latter as money, is to him nothing more than a credit instrument.

From whatever standpoint we approach this question, we cannot escape the conclusion that money cannot properly be classified either with "present goods" [19] or with "capital," [20] if capital is conceived as consisting of future goods gradually ripening into present goods. Coin is essentially "idle" or "dead" capital and, like credit, must logically be classified with "future goods." The postulated undervaluation of the future, therefore, fails to explain why men are so anxious to get money for merchandise and why borrowers, who have quantities of pre-produced merchandise unused on their hands, so willingly pay interest for the loan of money.

*Calvin's proposition.*—It is true that even as far back as the sixteenth century Calvin, the reformer, suggested, as an explanation for this phenomenon, that it is not the money that brings a legitimate earning, but the house or the farm obtained in exchange for the money. Idle money is sterile; but the bor-

[19] Cf. *ibid.*, p. 300 (285).

[20] Cf. *ibid.*, p. 70 (66).

rower does not keep it idle; he acquires in exchange for it something that is productive. And this is indeed the view taken by the business man universally. He borrows money because for money he can obtain any form of capital suited to his purpose. By borrowing money he increases his working capital from which he derives that profit which is the subject of the present disquisition.

But here we actually arrive at the point from which we started. We have obviously been arguing in a circle. We began with an inquiry into the cause of the general eagerness of men to obtain money for merchandise, and lo, we find ourselves accounting for it by the universal willingness of men to give merchandise in exchange for money. Surely, in the absence of such willingness the possessors of sterile money could not possibly acquire in exchange for it something that is productive. That which was to be explained has been taken for granted. This lapse of logic has apparently been overlooked by Professor Böhm-Bawerk, for he adopts Calvin's explanation without a question. He answers the perplexing problem of the relation of money to interest by the simple expedient of classing money as capital-goods and applying to it his conclusions relating to capital-goods, totally ignoring the fact that all the various forms of money when viewed as goods, constitute a class of their own and that their power to command interest must accordingly be traced to their own specific properties. If money is sterile, while the capital obtained in exchange for money is that which brings the income, justice would demand that the interest be paid, not to the money lender who furnishes only sterile goods, or, indeed, mere instruments of credit, but to him who gives real, profit-bringing capital in exchange for sterile money, for it is he who furnishes that from which the interest is derived. If it were true that interest naturally accrues to those who give present in exchange for future goods, it would properly follow that he who gives merchandise in exchange for mere credit instruments, like money, should normally receive interest on this temporary loan of goods; not, indeed, from anyone to whom he may subsequently lend these instruments, but from him to whom

he has given actual goods in exchange for mere credit tokens. Consequently, even if it were true that *capital* is the original source of interest, it does not follow that for this reason *money*, whatever be its form—a mere credit instrument—should command interest. The line of reasoning of Calvin is identical with that used by Turgot in the derivation of the "fructification theory of interest," the fallacy of which has been shown by no writer so conclusively as by Professor Böhm-Bawerk himself.[21]

Having taken as the basis of our considerations our author's proposition that "interest" is to be explained on the assumption that "present goods" are, as a rule, preferred to "future goods" of equal kind and number, we find ourselves here face to face with the fact that the most universal impulse in the business world is the desire to give merchandise, or "present goods," in exchange for money which is nothing but "future goods," the present value of which equals their *undiscounted* future value. It is just this desire which, while on the one hand furnishing at least a plausible, though incorrect explanation of the willingness of borrowers to pay interest on money loans, exhibits, on the other hand, a decided preference for "future" over "present" goods, at least in the case in which the "future" goods are in the form of *money*.

*Interest as a stimulant to the accumulation of capital.*—On a par with the theory of the discounted future is the widely prevailing notion that the capacity of capital to produce "interest" is an inducement without which capital would not be produced. In the absence of interest-returns the production of capital would, accordingly, lag, and the supply of those future goods which are derived from capital would be reduced. With this reduction of their supply their ultimate price would rise until the excess of their future value over the cost of producing the capital from which they are derived would adequately remunerate the preproducer or would invite competitive preproduction.

This idea is tersely expressed by the question propounded by Professor Böhm-Bawerk[22] whether "a man of affairs would

[21] *Geschichte und Kritik*, pp. 71 (61) ff.

[22] *Quarterly Journal of Economics*, January, 1896, p. 141.

permanently continue an enterprise in which the invested capital does not earn interest." To be sure, no business man would do so while capital invested in other enterprises does return interest. But when the causation of this income is in controversy, it is illogical to assume, as a matter of course, that capital in other enterprises returns interest. In the present inquiry we must assume the current rate of net interest to be *nil* and must try to find the causes that would restore the present rate. We should inquire whether a manufacturer would continue to employ means of production if, apart from such increased recompense as would be due to his own more efficient labor, their utilization would in the end repay him no more than their value. In other words, if employers have the choice between the primitive and the modern methods of making knit gloves, would they, in the absence of any specific recompense for "waiting" or "preproduction," choose the primitive method just because the modern, more efficient method incidentally includes the making of machines? There can be but one rational answer to this question. The increased productivity of the indirect method, combined with the ultimate gain in time, is an inducement for adopting the capitalistic method which far outweighs that due to the accretion of "interest." As a matter of fact, since the employer's income consists of the excess of the market value of his products over what it costs him to have them produced, he, more than anyone else, is interested in adopting the most efficient method. If he does so in advance of his competitors, namely while the market value of the class of goods he produces is still governed by the less efficient method, he will reap the income of a pioneer of industrial progress. If, on the other hand, his competitors are ahead of him in this respect, if the market value of these goods has already been influenced by the more or less general introduction of the improved method, the reduced price of these goods will compel him to follow in the wake of progress. How could a tailor ply his trade at the present day without the use of sewing machines? The claim, then, that "interest" is necessary to induce employers to adopt capitalistic methods is clearly without foundation.

There is, of course, no question that "interest" is a potent inducement for men to produce and acquire capital. In fact, as an inducement to production it over-reaches itself. It is no doubt, at least in part, responsible for that excess of the supply of industrial products over the capacity of markets which alone can account for various anomalous features of the present industrial era, such as the war-like aspect of competition, the prevalent dispositions to utilize tariffs as means of combating competition, the frequent periods of so-called over-production and their distressing sequel: lack of work, and other coincident conditions. But these manifestations clearly prove that the current rate of interest far more than balances the natural aversion to preproduction; and since an effort cannot exceed its cause, the current phenomenon of "interest" cannot be attributed to a prevailing under-estimation of the future which would naturally lead to the production of a quantity less, or at all events, not more than the market demands.

*Recapitulation.*—The preceding considerations show that not a single one of the cardinal premises on which the "positive theory" rests will stand critical examination. The indirect and complex methods of production involving the employment of capital, instead of being protracted, are in fact expeditious when compared with more primitive methods; nor can we find any facts in the world of affairs for the assumption that the preference of "present" over "future" goods is adequate to account for the prevailing rate of interest; and furthermore, since money cannot properly be classed either with present goods or with capital-goods, the theory, even were it applicable to account for the "earnings" of capital-goods, cannot in any way account for the power of money to command interest when loaned. Moreover, the assumption that interest is the essential inducement to the accumulation of capital is, in the last analysis, proven to be unwarranted. It is manifest that the phenomenon of "interest" is due to economic forces other than those adduced to explain it in the "Positive Theory of Capital."

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